History and Purpose of Claims in United States Patent Law

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Inasmuch as the claims of an inventor constitute the chief bone of contention both in and out of the Patent Office, it is thought that a study of the evolution of the claims practice might not be without profit. While the first statutes did not positively require an inventor to summarize his invention in a claim or claims, the practice of doing so obviously grew directly out of certain requirements of these statutes. The United States practice, in its development, is the more interesting in comparison with that of the leading foreign countries.

Foreign Practice (English).

Referring briefly to the requirements of some foreign governments, it is to be expected that our law should conform most closely to that of Great Britain which requires a complete specification "to conclude with a distinct statement of the invention claimed." Patentees should state, not what they claim *for* their inventions, but what they claim *as* their inventions. *Thornton on Patents, page 15.* The same author states the purpose of the claim to be "to define and delimit the invention, to enable the patentee to inform all whom it may concern exactly what it is he considers is his invention, and it is upon these claims that the validity of his patent invariably hangs."

Thornton gives the following rules for drawing claims under the English Practice:

> Be clear and precise and carefully enumerate the essential features, having in mind the question "what is the *essence* of the invention."
>
> Claim nothing that is not new.

Do not claim the principle alone, but only in combination with means for carrying it into effect. Claim the principle carried into effect in a specific way, and you automatically protect the principle. The discovery that the principle can be successfully applied is the important point and other devices involving the new principle would at any rate be subservient to the master patent. Do not claim the principle and every way of carrying it into effect.

Claim the combination if that is the novelty and also the one novel and essential element if there is one.

The clever claim-draftsman is the man who covers by his claim developments which are not actually in view, without imperilling the validity of the patent by the use of too ambiguous language.

Justice Fletcher Moulton in British United Shoe Machine Company *vs.* Fussell and Sons (Thornton, page 299), says that "the patentee must leave the public in no doubt whatever as to what constitutes that invention which he claims as his monopoly."

Under the English practice a reference to the specification and drawings in the claim limits the claim to the construction described and shown.

German Practice. The proposed new German Patent Law 1913 has this requirement with respect to the claim:

"At the conclusion of the specification it shall be stated what is to be placed under protection as patentable."

Under the German practice there must be some novel feature which performs or involves some new function. Claims for meritorious mechanical combinations are not patentable unless something has been accomplished which has not been accomplished before (Thornton on Patents). Radical improvements, for instance, in an internal combustion engine, which do not affect the cycle

of operations would be unpatentable but alterations of construction of apparatus of a trivial nature which would result in a different cycle of operations would be patentable.

> "The claim should first recite the common type to which the improvement is applied and thereafter enumerate in a subordinate clause or clauses the characteristic feature which distinguishes the new manufacture from previous forms; that is, a statement of what is old is to be followed by a statement of what is new."

Other Foreign Countries. The Austrian practice follows that of Germany. "Swedish practice is closely akin to that of Germany and Austria but applicant is obliged to characterize his invention more specifically in terms of the means employed for a particular purpose rather than in terms of the function to be discharged." (Fairweather Foreign and Colonial Patent Laws, page 241.) Under the French law "to the specification must be appended a résumé or succinct enumeration of the fundamental principle of the invention and of the secondary features if any (Fairweather, page 168).

Early History. The early Patent History of the United States is not entirely devoid of the element of humor, nor does it lack elements which appeal to the sense of national pride and patriotism. In its making is embodied the genius of John Marshall, Joseph Story, Bushrod Washington, Joseph Bradley, and other great judges of the Circuit Courts and the Supreme Court of the United States. Among the advocates before the patent bar, are the names of Charles Sumner and Daniel Webster. The earliest grants were given under the signatures of George Washington, Thomas Jefferson, Edmund Randolph. Before 1836 the law required the signatures of the President of the United States, the Secretary of State, and the Attorney General, the latter being required to examine the applications to see that they were "comformable to law."

An Early Decision. The following quotation from a decision of Judge Story rendered over a hundred years ago is interesting as showing the court's idea of the progress and advance of the art at that early period:

> "In the present *improved state of machinery*, it is almost impracticable not to employ the same elements of motion to produce any new effect," noting "the gradual progress of the invention from the first rude attempts to the *present extraordinary perfection*; from the slight combination of simple principles to the *present wonderful combinations* in ingenuity and intricacy scarcely surpassed in the world."
>
> Whittemore et al. *vs.* Cutter U. S. Circuit Court, 1st Circuit, Oct. 1813.

In the same court in 1814 (Odiorne *vs.* Winkley) we have a picture of a jury of unskilled citizens struggling with a "reference" in the form of a nail cutting and heading machine produced in court to be compared with the patented machine also produced. Expert witnesses testified as to the identity and diversity of the two machines in their principles and modes of operation. With no statement of the patentee of any value as to what constituted the invention, the jury must decide whether the patentee made an invention and if so in what it consisted.

Two Periods. In the evolution of the claim there are broadly two periods, that prior to 1836 and that succeeding this date. In practice there was no clearly defined line between these periods, one merging into the other with no marked change in 1836. Patents of the latter part of the first period almost universally have formal claims although not required by law. The law of 1836 merely endorsed and positively required what inventors had been doing voluntarily for years prior to this date.

THE STATUTES.

Requirement for a Distinction Between New and Old.

The act of 1790 was the first Patent Statute. This act required the grantee of each patent to deliver to the Secretary of State a specification in writing, containing a description of the thing or things by him invented, which specification shall be so particular as to *distinguish* the invention or discovery from other things before known and used. This requirement for such a disclosure as will *distinguish* the new from the old forms the original basis of our claims. The direction is a general one, leaving it to the inventor to decide the best way to distinguish. The very early inventors thought the requirement satisfied merely by a description of the thing supposed to have been invented. In the case of an invention totally new, disconnected from other things before known and used, the law was easily conformed to; but not so in the case of an improvement on something already known.

The act of 1793 repeated the above requirement and added:

> "In the case of a machine, he shall fully explain the principle, etc., by which it may be *distinguished* from other inventions."

The requirement for a distinction between the new and the old is clear and positive in these early statutes. In the act of 1836, we find the first positive requirement for a claim in the words:

> "He shall particularly specify and point out the part, improvement or combination which he claims as his own invention or discovery."

Section 26 of the act of 1870 and Section 4888, R. S., change the wording to: "He shall particularly point out and distinctly claim." These provisions of the various statutes constitute the sole basis for the law built up on this subject.

Practice Under Act of 1793. Referring to the practice under the acts of 1790 and 1793, it soon became apparent that the public and the courts had the great burden imposed on them of sifting out a patentee's invention by a careful scrutiny of the "schedule" or specification of the patent in connection with the prior art. Such was the case in Odiorne *vs.* Winkley and Whittemore et al. *vs.* Cutter, both above cited. In the latter case, Justice Story said:

Burden on Public and Courts.

> "The intrinsic difficulty is to ascertain the exact boundaries between what was known and used before and what is new."

Summary Binding. Some of the early patentees voluntarily summarized their inventions at some point in the schedule or specification and it was uniformly held by the courts that in such cases, the patentee was bound by his summary. In Moody *vs.* Fiske et al., Assoc. Justice Story (1820), where the patentee stated: "I claim as new and as my invention the following: 1. The position of the rollers," held the patent void because this position of the rollers as shown by the evidence was not new. The justice said:

> It is often a serious difficulty from the obscure language of the specification to ascertain what is the nature and extent of the invention claimed by the patentee. Whether his patent be valid or not must materially depend upon the accuracy and distinctness with which the invention is stated. But in all cases where the patentee claims anything as his own invention in his specification, courts of law can not reject the claim. Where a patentee in his specification states and sums up the particulars of his invention and his patent covers them, he is confined to such summary.

Likewise Judge Baldwin in Whitney et al. *vs.* Emmett et al., 3rd Circuit, 1831, holds "the summing up binding."

Claim Construed With Rest of Specification.

However, this stringency was frequently modified by construing the summary in connection with the rest of the specification if there were incorporated in the summary a reference to the specification. This interpretation of the law is noted in some of the later decisions of Justice Story. In Wyeth *vs.* Stone (1840), the following claim was held to save the patent on this theory:

> "The invention of this art as well as of the *particular method of the application* of the principle is claimed by the subscriber."

Likewise in Stone *vs.* Sprague, Fed. Cases, 13487 (1840), the same justice held that the patentee—

> "limits his invention to the specific machinery and mode of communication of motion set forth and specifically described in the specification."

The claim in this case stated:

> "I claim as my invention the connection, etc., *as above specified.*"

The patents in these two cases were granted under the act of 1793. To the same effect are the decisions under the act of 1836 by Justice Woodbury in Davoll *vs.* Brown, Fed. Cases, 3662 (1845), and Justice Curtis in Silsby *vs.* Foote, 14 How., 226 (1852). The claim in the former case calls for:

> "The arrangement of the spindles and flyers in two rows in combination with the described arrangement of gearing."

The claim did not specify the kind of flyer but the court held it thus limited from the specification. The gearing could not be used with any other kind of flyer In the latter case the justice states respecting the following claim:

> "I claim the combination above described by which the regulation of the heat of a stove or other structure in which it may be used is effected."

"The patent calls for all the elements of the combination as are actually employed to effect the regulation of the heat according to the plan of the patentee described in his specification."

"When a claim does not point out and designate the particular elements which compose the combination but only declares, as it properly may, that the combination is made up of so much of the described machinery as effects a particular result, it is a question of fact which of the described parts are essential to produce that result."

Early Decisions.

The requirement for a distinction between the new and the old is insisted upon in numerous decisions under the early statutes. The early judges followed a leading English decision to enforce this requirement of the law. Lord Ellenborough in McFarlane *vs.* Price (1 Starkies, N. P. R. 199), holds:

"It is essential to point out what is new and what is old. A patent ought to inform the person who consults it what is new and what is old. A person ought to be warned by the specification against the use of a particular invention."

In Lowell *vs.* Lewis (1817) Fed. Cases, 8568, Justice Story says the patentee—

"should distinguish what is new and what is old in his specification so that it may clearly appear for what the patent is granted. . . .

If the description mixes up the old and the new and does not distinctly ascertain for which in particular the patent is claimed, it is void; since if it covers the whole it covers too much, and if not intended to cover the whole, it is impossible for the court to say what in particular is covered as a new invention. It is sufficient, however, if what is claimed as new appear with reasonable certainty on the face of the patent either expressly or by necessary implication. But it ought to appear with reasonable certainty; for it is not to be left to minute inferences and conjectures."

One of the leading early cases is that of Evans *vs.* Eaton, 3 Wheaton, 518. This case first came before Chief Justice Marshall in 1818, in which the Chief Justice laid down the law as follows:

> "In all cases where a patentee's claim is for an improvement on a machine, it will be incumbent on him to show the extent of the improvement so that a person understanding the subject may comprehend distinctly in what it consists."

When this case came up for a second trial in the Circuit Court of the United States for the District of Pennsylvania, Justice Bushrod Washington of the United States Supreme Court remarked: "Of what use is the specification unless it be to define with precision the extent and nature of the improvement," and on appeal to the Supreme Court before Justice Story in 1822, the justice has this to say about the purpose of a patent specification:

> "The specification has two objects:
>
> "1st. To make known the manner of constructing the machine so as to enable artisans to make and use it and thus give the public the benefit of the discovery.
>
> "2d. To put the public in possession of what the party claims as his own invention. The specification must distinguish the invention from all other things before known. How can that be a sufficient specification of an improvement in a machine which does not distinguish what the improvement is, nor state in what it consists, nor how far the invention extends; which describes the machine fully and accurately as a whole, mixing up the new and the old, but does not in the slightest degree explain what is the nature or limit of the improvement which the party claims as his own."

This decision and McFarlane *vs.* Price were quoted and followed in Barrett et al. *vs.* Hall et al., Fed. Cases. 1047, by Justice Story in the Circuit Court of the United States, District of Massachusetts.

In Dixon *vs.* Moyer, Fed. Cases, 3931 (1821) Assoc. Justice Washington says:

> "It is not enough for the plaintiff's counsel or the witnesses to point out at the trial or even for the jury to perceive by examination of the thing patented and comparing it with others before in use, what it is that constitutes the improvement. Third persons wishing to avoid submission to the penalty which the law imposes on them and the troubles and expense of litigation can safely depend upon no other information than what the records of the Secretary of State's office afford. No description of the discovery secured by a patent will fulfill the demands of justice and of the law, but such as is of record there. The specification contains the whole truth relative to the discovery; but the objection is that throughout the whole of a very intelligible description of the mode of making the saddle, the patentee has not distinguished what was new from what was old before in use, nor pointed out in what particulars his improvement consisted."

These decisions are followed by Justice Woodbury in Hogg *vs.* Emerson, 6 How., 484.

Decisions Under the Act of 1836.

From a study of the above cases, the deficiency of the early patent specifications is easily seen. Endless difficulties for the courts and public, and great and irreparable loss to inventors and patentees resulted from failure to distinctly claim the invention to be covered by the patent. While the above decisions place the burden, under the law, of setting forth the invention on the patentee, as a matter of fact the cases show that this burden fell on the public and the courts because of the failure of the patentees to assume it. The obvious solution of the problem was to require the inventor to formulate his invention in a claim or claims at the end of his description. This, the act of 1836 for the first time positively required.

Growth of the Modern Claim.

The mere embodiment of a formal claim as required by the act of 1836 however, was not a panacea for all difficulties. It remained for the lawyers of succeeding years to perfect the practice by evolving a claim of proper form and substance to clearly and distinctly set forth the invention. The claims of many patents under the new act remained so informal, indefinite, unprecise, and inadequate to define the invention as to afford little relief to the courts and public.

A patent to William Hovey granted September 23, 1845, was the subject of a suit in Hovey *vs.* Stevens, Fed. Cases, 6745, in the 1st Circuit under Justice Woodbury in 1846. The claim involved set forth giving to a cutter a traveling motion in combination with a reciprocatory rotary motion indirectly referring to the elements of his construction. The court was willing to construe the claim to be for "the mode or manner of producing these motions," the combination of which was, however, proved to be old. The law with respect to a distinction between the new and old was re-affirmed, this, said the justice, being part of the bargain with the Government.

> "How easy it would have been to say what the inventor wished and to say it so as to be intelligible to all; some new part or combination of old parts. But now all is doubtful on the face of the patent. The only thing certain is the combination of the two motions, but this is admitted to be old."

An interesting case in which the patentee needlessly limited the definition of his invention is that of Winans *vs.* Denmead, 15 How, 341 (1853). The claim called for a car body in the form of the frustum of a cone. Justice Curtis held that other shapes of car bodies having the same mode of operation infringed the claim. "In contemplation of the law a patentee is deemed to claim every form in which his invention may be copied."

As showing how the courts looked upon the purpose of the claim in 1868 attention is called to the statement of District Judge Shipman Circuit Court for the District of Connecticut in Blake *vs.* Stafford, Fed. Cases, 1504,

following Lowell *vs.* Lewis, Moody *vs.* Fiske, and Barrett et al. *vs.* Hall et al.

> "The office of the claim is to define the limits of the patented discovery claimed by the patentee as his exclusive property. If the court can clearly see the nature and limits of the invention, the claim will be upheld."

Some Decisions of Commissioners of Patents.

Coming now to certain decisions of early Commissioners of Patents, in *Ex parte* Continental Wind Mill Co., C. D., 1870, Acting Commissioner Duncan held the following claim unobjectionable:

> "The arrangement of gearing for communicating motion from the windwheel shaft to the driving shaft by interposed reversing cog wheels, substantially as described, in combination with the turn table, or equivalent, and the vane for holding the windwheel to the wind."

The following reproof of the attorney is interesting as showing this early Commissioner's views respecting the form of claims:

> "The claim is clumsily constructed and reflects little credit upon the professional skill employed in framing it. Yet, it can have but a single interpretation and in a legal aspect is unobjectionable."

Claims in the Participial Form.

Acting Commissioner Thacher in 1872 criticises the following claim in a wet gas-meter specification:

Beginning of Modern Practice.

> "Increasing the area of the water surface in one chamber with relation to that in another chamber, by constructing the one chamber with the enlargement shown in Figures 2 and 3."

The claim should read:

> "The inlet chambers provided with an enlargement having a certain relation."

Commissioner Leggett in the same year calls attention to the bad form of a similar claim in *Ex parte* John M. Cornell; also in *Ex parte* T. C. Hooper:

> "I have no doubt but that, if allowed, the courts would by a liberal construction save the claim. The reference to mechanism would enable a court in its efforts to save the patent to so construe the claim as to make it embrace the means by which the ends of beams are prepared, although in terms the claim is for preparing the ends of the beams. The fact that courts will construe loosely-drawn and ambiguous claims so as to save the patent if possible is no valid reason for allowing such claims and is no justification of attorneys in pressing them upon the office. The public has a right to know the exact limitations of a patentee's monopoly and for that reason the law requires distinct, exact, and sharply defined claims (Sect. 26 and Rule 44).

The above view of the requirements of the law is repeated by Acting Commissioner Thacher in 1873 in the case of *Ex parte* Cox in an application for the reissue of a patent granted in 1850, in which claims in the participial form were allowed without objection, "under a former lax practice. Now that they are before the office again, they should be amended to conform to the decisions of the courts and the present practice of the office." These decisions rendered over forty years ago are interesting as showing the beginning of the present practice of the office with reference to the positive inclusion of elements in a claim. Justice Bradley in Ives et al. *vs.* Hamilton, C. D., 1876, in a suit on a patent granted September 5, 1865, raised no objection to a claim in this participial form, viz.: "Giving to a saw a certain movement," etc., and Judge Blatchford in Lull *vs.* Clarke et al., C. D., 1882, U. S. Circ. Court of Dist. of New York, construed this form of claim as one for mechanism, stating it to be awkwardly drawn but that the description must be looked to to ascertain what the mechanism is.

Under the principle of "Lex non cogit ad impossibilia"

the following claim was held good by Acting Commissioner Doolittle in 1876 in *Ex parte* Tweedle:

> "As a new article of manufacture, the petroleum product hereinbefore specified and having the characteristics herein described,"

followed by a process claim by which the product was produced. It was held that it was not possible or practicable to more distinctly claim the product in question without repeating the greater part of the specification. It was "a new product as yet unchristened and its properties unknown had been discovered." It was an exceptional case. The product could only be defined by reference to the process.

This decision therefore was not allowed to sanction the following claim for a medical compound in the case of *Ex parte* Williams C. D., 1877:

> "The hereinbefore described compound or composition of matter, consisting of the ingredients mentioned, prepared in the manner and proportion substantially as described and for the purpose set forth."

Acting Commissioner Doolittle says the applicant might as well say:

> "I claim the invention described."

The claim should set forth the "composition consisting of the elements (naming them) in the proportions and combined in the manner described.

The Courts and Modern Practice.

The following quotation from Justice Miller's decision, Supreme Court of the United States, 1877, in Merrill *vs.* Yeomans et al., sums up the state of the Patent Laws at that time:

> "The growth of the patent system in the last quarter of a century (1852-1877) in this country has reached a stage in its progress where the variety and magnitude of the interests involved require accuracy, precision, and care in the preparation of all the papers on which the patent is

> founded. The developed and improved condition of the patent law and of the principles which govern the exclusive rights conferred by it, leave no excuse for ambiguous language or vague description. The public should not be deprived of rights supposed to belong to it without being clearly told what it is that limits these rights. The genius of the inventor making improvement should not be restrained by vague and indefinite description of claims in existing patents from the salutary and necessary right of improving on that which has already been invented."

Justice Bradley approving this view of the law in The Keystone Bridge Co. *vs.* Phoenix Iron Co., C. D., 1877, says:

> "When a claim is so explicit, the courts can not alter or enlarge it. If the patentees have not claimed the whole of their invention they should have sought a re-issue. They can not expect the courts to read through the history of the art and spell out what they might have claimed but have not claimed. Since the Patent Act of 1836 the patent laws require that an applicant for a patent shall not only by a specification in writing fully explain his invention but shall particularly point out and distinctly claim the same. This provision was inserted in the law for the purpose of relieving the courts from the duty of ascertaining the exact invention of the patentee by inference and conjecture derived from laborious examination of previous inventions and a comparison thereof with that claimed by him. This duty is now cast on the Patent Office. There his claim is, or is supposed to be, examined, scrutinized, limited and made to conform to what he is entitled to. As patents are procured ex parte, the public is not bound by them, but the patentees are. And the latter can not show that their invention is broader than the terms of their claim; or if broader, they must be held to have surrendered the surplus to the public."

This view of the law is repeated by the same justice in Burns *vs.* Meyer 100 U. S., 671, 1879, 20 O. G., 1891.

To the same effect is the decision of Judge Nixon, U. S. Circ. Court, Dist. of New Jersey, 1880 in Delaware Coal and Ice Co. *vs.* Packer, C. D., 1883.

> "It is the office of the claim to reveal to the world what the characteristics of the invention are for which the patentee desires protection."

That a patentee is strictly limited to his claim is taught in Couse and Blood *vs.* Johnson et al. C. D., 1879. Judge McKennon, U. S. Circ. Court, W. Dist. of Pennsylvania: The Lehigh Valley R. R. Co. *vs.* Mellon et al. C. D., 1881, Justice Woods, Supreme Court of the United States: McKesson et al. *vs.* Carndick, C. D., 1882, Justice Blatchford, U. S. Circ. Court S. Dist. of New York: McCarty *vs.* Lehigh Valley R. R. Co. (1895), 160 U. S., 110; National Enameling Co. *vs.* New England Enameling Co. (1906), 151 Fed. Rep., 19. On the other hand, in Aram et al. *vs.* Moline Wagon Co., 1883, Judge Blodgett in U. S. Circ. Court for N. Dist. of Illinois, held a claim infringed even though the defendant used a different construction from that set forth in the claim where this part of the construction was old. The court held that the essential features of the patent were present in the defendant's machine. The patentee's invention can not be thus taken from him. Likewise, in a recent decision of Judge Lacombe, Circuit Court of Appeals, Second Circuit, 209 O. G., 1689, while the claim set forth iron as an ingredient, the court held the claim infringed by the defendant's composition although iron was not used but some equivalent therefor. The invention being a pioneer invention, is entitled to a liberal construction of the doctrine of equivalents.

In Schillinger *vs.* Cranford, C. D., 1886, Judge Hagner, Supreme Court of the District of Columbia, held a mixture of concrete and sand not an equivalent of tar paper, placed between blocks of concrete, although the claim called for "tar paper or its equivalent." "One seeking a monopoly may surely be required to use plain terms that plain people may be able to understand, explaining what it is he claims to have invented."

In Thayer *vs.* Spaulding, C.D., 1886, Judge Blodgett held the following claim infringed:

> "The open cage provided with the forehead rest *arranged in it substantially as represented.*"

The patentee being the first in the art to show a rest for the forehead in a mask intended to protect the face, he had a right to cover the forehead rest broadly, not the special means by which he fixed it to the wires of the cage. The defendant's head rest performed the same function as that performed by the patentee's head rest, although fixed to the cage by different means.

In Becker *vs.* Hastings et al. C. D., 1884, Judge Butler, U. S. Circ. Court for the Eastern District of Pennsylvania, refused "to enlarge a claim by construction. Whether the claim might have been made broader in view of the invention described in the specification, and shown in the drawings, we need not consider. The language of the claim is plain."

Acting Commissioner Dyrenforth in *Ex parte* Holt, C. D., 1884, says:

> "The aim, the end, the purpose of the claim is to point out particularly and distinctly define the invention to be secured to the individual. The claim is the measure of the patent and the day has passed when the courts will search through the specification for information which it is the very office of the claim to impart."

This law is repeated by the same Commissioner in *Ex parte* Wilkin, C. D., 1884, and McClain *vs.* Ortmayer, 141 U. S., 419 (1891).

In *Ex parte* Paige, C. D., 1887, Commissioner Hall says with respect to the purpose of the claim:

> It should protect the public in two important and essential particulars:
>
> 1. To define the invention as a property, the use of which has become a monopoly by virtue of the patent, so as to protect the public who deal with it.

> 2. To define and mark out clearly the field of the invention with reference to the subject-matter involved so that the public inventive genius of the people may not be deluded by indefinite claims, or frightened or deterred from following inventive pursuits by claims apparently covering, matter, extent, or scope not possessed or not patentable.

In Smith et al. *vs.* Murray et al. C. D., 1886, U. S. Circuit Court, North Dist. of Illinois, Judge Blodgett held that a claim could not answer for a description of the invention, the claim specifying, "exsiccated ammonia-alum," although the specification did not describe the latter nor how to compound it with the other ingredients. That is, a claim without a specification is as deficient as a specification without a claim.

In Rogers on Patents, page 57, the present practice with respect to claims is summed up as follows:

> "The tendency of the times appears to be to more simplicity and precision in the drawing of claims so that patents shall seldom require interpretation or construction and so that in any cause, whether in the Patent Office or without, the proceeding may be based upon a clear statement of the actual invention with only the limiting clauses necessary or desirable to place the invention in its proper relation to the art. The one essential thing is that the novel invention shall be clearly expressed."

THE "INVENTION" MUST BE DISTINGUISHED.

Referring to another aspect of this subject, it may be noted that a claim may particularly point out and distinctly define a certain structure but that structure may not be the applicant's or patentee's invention. In other words, the requirement of particularity, definiteness, and distinctiveness may be fully complied with, and yet the patent may be fatally defective because the party's invention (the part, improvement, or combination) is not distinguished in the claim with the emphasis on

the "invention," rather than the "distinction." This fault may manifest itself in two ways. A claim may include too much of the old with the new, or, it may cover the new too broadly. The point in mind is illustrated in the early English decision of Hornblower *vs.* Boulton King's Bench, Jan. 25, 1799. The patent in suit was that to James Watt for lessening the consumption of steam in engines by an alteration of, and addition to, parts common to all steam engines. The court held that Watt was not entitled to a patent for—

> "the sole vending and making the whole engine so altered and improved; for such a patent would have been more extensive than the thing invented. The patent must be supported as granted for an improvement and addition to old engines known and in use."

If in such case, "the patent is for the whole machine, it is void." Boulton *vs.* Bull, 2 H. Bl., 463. The same law is set forth in Bevil *vs.* Moore, 2 Marshall's R., 211.

> "If the invention be an improvement only . . . the specification should be drawn up in terms which do not include anything but the improvement" (McFarlane *vs.* Price).

These English decisions are approved by our own courts in Whittemore *vs.* Cutler (Justice Story); Goodyear *vs.* Matthews (Justice Livingston, 1814); Lowell *vs.* Lewis (1817); Evans *vs.* Eaton; Barrett et al. *vs.* Hall et al., Fed. Cases, 1047 (Justice Story, 1818) and O'Reilly *vs.* Morse, 15 How., 119 (Justice Taney, 1853).

> "A patentee can not include in his patent the exclusive use of machinery already known" (Lowell *vs.* Lewis).
>
> "The law requires that a patentee shall not claim as new what is covered by a former invention whether made by himself or any other person" (O'Reilly *vs.* Morse).

A patent to McCormick granted in 1845, and involved in the suit of McCormick *vs.* Talcott, 20 How., 405 (1857) contained the following claim:

> "I claim the combination of the bow L, and the dividing iron M for separating the wheat in the way described."

Justice Grier states the law as follows:

> "If he be the original inventor of the device or machine called the divider, he will have a right to treat as infringers all who make dividers operating on the same principle and performing the same functions by analogous means or equivalent combinations. But if the invention claimed be itself but an improvement on a known machine by a mere change of form or combination of parts, the patentee can not treat as an infringer one who has improved the original machine by the use of a different form or combination performing the same functions. The inventor of the first improvement can not invoke the doctrine of equivalents to suppress all other improvements which are not mere colorable evasions of the first."

In Phillips *vs.* Page, Justice Nelson, 24 How., 164' Supreme Court of the United States, 1860, criticized a claim for "a precise organization of an old machine."

> "Instead of claiming the old parts, the claim should have excluded them and claimed the new by which the old were adapted to the new use, producing the new result."

In Burr *vs.* Duryee, 1 Wall, 531, U. S. Supreme Court, 1863, Justice Grier says:

> "An inventor who has made an improvement in a machine can not include all previous inventions, and have a claim to the whole art, discovery or machine which he has improved. All others have an equal right to make improved machines provided they do not embody the same, or substantially the same, devices or combination of devices which constitute the peculiar characteristic of the previous invention."

The same statement of the law is repeated in Case *vs.* Brown, 2 Wall., 320, by the same justice (1864).

In Burden *vs.* Corning, 2 Fish, 489, Judge Hall in U. S. Circuit Court, N. Dist. of New York, 1864, states the law in these words:

> "Before and after the plaintiff's invention any person was at liberty to invent, patent, and use new and distinct improvements upon any or either of the then existing machines; any inventor might properly patent and use the device invented and patented by him for that purpose provided it was as independent, distinct and substantially different device from any of those previously invented. Although several inventors might obtain substantially the same result, if it was obtained by means substantially different in character, construction, and arrangement and mode of operation from any prior invention adapted to the same general purpose, the use of such means for a similar or even for the same purpose, would not infringe the rights of the patentee."

To the same effect is the decision of Judge Wallace in the United States Circuit Court, S. Dist. of New York, in Railway Register Mfg. Co. vs. Third Ave. Ry. Co. et al., C. D., 1888. The prior art showed a combination between the indicator and the trip-register:

> "It was open to the patentee to invent a new one or one between the indicator and trip-register and a permanent register. But after he had done this, it was open to others to make a combination, between the same parts which would accomplish a similar result by a different organization, introducing a different mode of operation. The apparatus of defendants had done this."

Their permanent register was actuated with every actuation of the trip register instead of at the end of the trip as in the patentee's apparatus.

Invention in Both the Combination and a New Element.

That an invention may consist both in the combination of old elements and in a new element is taught in Seymour *vs.* Osborne, 11 Wall., 547, Justice Clifford in Supreme Court of the United States, 1870:

> "Patented inventions are also made which embrace both a new ingredient and a combination of old ingredients embodied in the same machine. . . . The property of the patentee consists not only in the new ingredient but also in the new combination."

Invention in a Single Feature.

Circuit Judge Drummond in Brown *vs.* Selby, Circ. Court, N. Dist. Illinois (C. D., 1871), criticises the patentee's claim thus:

> "This claim is for the whole machine. The plaintiff was not the inventor of the corn planter. He was at most an improver. He should have stated what his improvement was. If a man merely improves an agricultural implement, he should clearly disclose what is new. A claim put in such general terms ought not be permitted to stand. The plaintiff lays his hand on the entire corn planting machine. He uses the improvements of others. It was not fair to the public to use those improvements and then say that he claimed them as well as his own. These vague and sweeping claims of entire machines where the patentee has only improved a part ought not to be encouraged."

This statement of the law is repeated by Judge Woodruff, North Dist. of New York, 1873, in Marsh *vs.* Dodge and Stevenson Mfg. Co.

Commissioner Spear in *Ex parte* Funck, C. D., 1878, says:

> "If an additional feature entirely independent of old elements so far as co-acting with them, is incorporated in a device, it must be manifest

> that the claim should cease when it has specified the single feature. The retention of the old elements in the claim when there is nothing in common between them and the one newly added to the machine is a mis-statement of the invention, giving a fictitious importance to the improvement and defeating any accurate judgment of its merit because of the obscurity resulting from the erroneous association."

In *Ex parte* Kitson, C. D., 1881, Commissioner Marble held a claim good although it did not include "a feeding apron or means for feeding cotton to the grasping rolls." This, he said, is part of the old machine and need not be included.

> "The improvement did not extend to the feeding apron. It performs the same function as in the old machine. Applicant's claims begin with his improvement. It is well settled that it is not necessary to include in a claim for a combination as elements thereof, all parts of the machine which are necessary to its action, save as they may be understood as entering into the method of combining and arranging the elements of the combination."

The same law is taught in *Ex parte* Skinner, C. D., 1881, by the same Commissioner.

In *Ex parte* Laskey, C. D., 1889, the applicant presented the following claim:

Invention in the Combination.

> "The combination with the stitch-forming and cloth-feeding mechanism of a sewing machine, of an automatically expansible or yielding hemmer and feller to permit the passage of enlargements of the cloth, substantially as described."

The Examiner objected that applicant had only added to the old stitch-forming and cloth-feeding mechanism in a sewing machine, "an automatically expansible and yielding hemmer and feller." The means for securing this automatic action and the expansive and yielding action should be set forth.

Commissioner Mitchell stated that the Examiner's position was correct providing the two means noted were applicant's invention. But applicant insists that the combination is his invention—a combination of which the peculiar hemmer and feller is an element irrespective of the mere means by which its automatic action or its expansive and yielding action is secured. The inventor claims to be the first who used said hemmer and feller with the stitch-forming and cloth-feeding mechanism. He is entitled to the claim if new.

Cooperation Necessary to a Combination.

In *Ex parte* Griffith, C. D., 1898, Acting Commissioner Greely had the same question before him. Mr. Greely said:

> "Applicant can not be permitted to claim his invention in combination with any and every other invention which he may disclose without regard to whether there is any cooperation between them. An improvement in a particular element is a different thing from the combination of that element with others. A party may invent an improvement on a certain element of an old combination without in any manner changing that combination itself and in such case he is not entitled to a claim as the inventor of the combination, although it includes the thing which he has really invented. The statute does not require that applicant shall claim an apparatus which includes the thing which he has invented but that "he shall particularly point out and distinctly claim the part, improvement, or combination which he claims as his invention or discovery."

In the well-worn decision of Acting Commissioner Moore in *Ex parte* McNeil affirmed by Judge Shepard of the Court of Appeals of the District of Columbia, C. D., 1902, the claim in controversy reads:

> "In a sewing machine, in combination with stitch-forming mechanism, including devices for forming two rows of *irregular stitches, the adjacent*

> *loops of which are interlocked,* of a trimmer arranged in advance of the stitch-forming mechanism, and in the line of the seam, substantially as described."

The presumed novelty set forth resided in a stitch-forming mechanism different from the reference showing the combination, i. e., one forming "irregular stitches, the adjacent loops of which are interlocked." Acting Commissioner Moore held that applicant, not being the inventor of the combination, there being no special co-action between the stitch-forming mechanism and the trimmer, each acting in its own way and not affected by the other and performing its function in the combination irrespective of the other, was not entitled to the claim.

In Langan *vs.* Warren Axe and Tool Co., C. D., 1911, the Circ. Court of Appeals for the 3rd Circuit held a claim to a grab-hook bad because it included a draft appliance as an element of the combination. The grab-hook was new but grab-hooks and draft appliances in combination were old. The patentee did not invent the combination and should not have claimed it. The draft appliance acted in the same way as heretofore in the combination; that is, the new grab-hook did not act differently in the combination from old grab-hooks; hence the combination was not the new invention of the patentee.

The above decisions are supported by the long line of decisions on aggregations. The gist of the law as set forth by them is that there must be some *special co-operation* between a new element brought into an old combination and the elements of the old combination as explained by Commissioner Mitchell and Commissioner Moore. Herein lies the difficulty; i. e., to determine whether there is present this cooperation. The principle is clear but its application to individual cases difficult. As stated by Justice Story one hundred years ago:

> "The doctrine of patents may truly be said to constitute the metaphysics of the law. The difficulty lies not so much in the general princi-

ples as in the minute and subtle distinctions which occasionally arise in the application of those principles."

Barrett et al. *vs.* Hall et al., 2 Fed. Cases, 923.

Claiming the New Too Broadly.

The second fault above noted is illustrated in the telegraph case of O'Reilly *vs.* Morse, 15 How., 119. The Morse patent claimed:

"The use of the motive power of the electric or galvanic current which I call electro-magnetism however developed for marking or printing intelligible characters, signs or letters at any distances, being a new application of that power which I claim to be the inventor."

Chief Justice Taney, Supreme Court of the United States, 1853, held this claim too broad. It covered any other machinery to effect the same result. The court argues:

"Was the first inventor of the use of steam as a motive power in printing presses entitled to a patent giving him the exclusive right to use steam as a motive power, however developed, for the purpose of marking or printing intelligible characters? Prof. Morse has not discovered that the electric or galvanic current will always print at a distance, no matter what may be the form of the machinery or mechanical contrivances through which it passes. The patent embraces nothing more than the improvement described and claimed as new and that any one who afterwards discovered a method or means of accomplishing the same object substantially and essentially differing from the one described, had a right to use it; any one who uses substantially different means does not infringe the patent."

In Scott *vs.* Ford et al., C. D. 1878, Commissioner Spear held the following claim bad:

The combination with a printing machine of pasting and folding mechanisms, whereby sheets

are printed, pasted upon the desired lines of ultimate folding and folded so as to form a folded sheet or signatures.

"A printing machine was never before combined with pasting and folding mechanism. It was a revolution in the newspaper printing art. However, the claim exceeds the actual invention because it is not limited to a *web* printing press, the only kind shown. It has not been demonstrated how any other press than that style can be successfully operated in obtaining the desired ends."

The following claim was held good:

> The combination of printing, cutting, pasting, and folding mechanisms whereby a web of paper is printed, severed into sheets, said sheets pasted on their folding lines, and folded or doubled two or more times, to form complete folded packs or signatures.

In comparison with the decision in O'Reilly *vs.* Morse, an interesting decision is that of the American Bell Telephone Co. et al. *vs.* Spencer et al., by Judge Lowell in U. S. Circuit Court for the Dist. of Mass., in 1881. The fifth claim of the Bell patent called for a "method and apparatus for transmitting vocal or other sounds telegraphically by causing electrical undulations of the air accompanying the said vocal or other sounds, substantially as set forth." The defendant used a different specific method of producing the electrical undulations, made on the principle of the microphone, the modern telephone transmitter. The Bell patent employed the armature of an electro-magnet set in vibration by sound waves. Judge Lowell said:

> "If the Bell patent were for a mere arrangement or combination of old devices to produce a somewhat better result in a known art, then no doubt a person who substituted a new element not known at the date of the patent might escape the charge of infringement. But Bell discovered a new art—that of transmitting speech by electricity—and

> has a right to hold the broadest claim for it which can be permitted in any case, not to the abstract right of sending sounds by telegraph without any regard to means, but to all means and processes which he has both invented and claimed."

Judge Lowell held:

> "The invention to be for *nothing less than the transfer to a wire of electrical vibrations like those which a sound had produced in the air*,"

and that the claim was "not so broad as the invention," the court presumably having in mind the specific apparatus disclosed in the patent. It was drawn "in view of the O'Reilly *vs.* Morse decision to cover both a process and apparatus—any process and any apparatus of *substantially similar character to those described.*" Bell's patent distinctly points out that the undulations may be produced in other modes besides the vibration of an armature in front of a magnet. The defendant's microphone "does the same sort of work and does it in a mode not wholly unknown at the date of the patent." Bell's patent did not cover the exclusive use of electrical means for transmitting vocal sounds; but only of means "substantially similar in character." to the patentee's, the specification of the patent being construed with the claim. The Morse patent claimed the exclusive use of the voltaic current for transmitting signs at a distance.

As pointed out by Chief Justice Waite, U. S. Supreme Court, in Overland Telephone Co. et al. *vs.* American Bell Telephone Co. et al. (C. D., 1888, 322):

> "A claim was however sustained in the Morse patent for making use of the motive power of magnetism, when developed by the action of a current or currents, substantially as set forth in the foregoing description, . . . as means of operating or giving motion to machinery which may be used to imprint signals upon paper or other suitable material, or to produce sounds in any desired manner for the purpose of telegraphic communication at any distance." "The effect of this decision," says Chief Justice Waite, "was

> therefore that the use of magnetism as a motive power without regard to the particular process with which it was connected in the patent could not be claimed, but that its use in that connection could."
>
> "In the present case the claim is not for the use of a current of electricity in its natural sta e as it comes from the battery but for putting a continuous current in a closed circuit into a certain specified condition for that purpose. It may be that electricity can not be used for the transmission of speech except in the way discovered by Bell; his patent gives him exclusive use then for that purpose. The apparatus as herein described is undoubtedly one in which an electro-magnet is employed and constructed 'substantially as set forth' in the specification. One acting by the variable resistance method is not described. The patent is for both the magneto and variable resistance *methods* but for the particular magneto apparatus described or its equivalent."

It is seen that Chief Justice Waite here saved the claim by construing it for the apparatus as limited by the specification.

In Columbus Watch Co. et al. *vs.* Robbins et al., C. D., 1895, Circ. Judge Taft, U. S. Circ. Court of Appeals, 6th Circuit, saved the following claim by "restricting it by construction."

> As an improvement in stem winding and setting watches, a winding and hand-setting train which is adapted to be placed in engagement with the winding wheel or the dial wheels by the longitudinal movement of a stem arbor that has no positive connection with said train, substantially as described.

The court held that the claim did not seek to appropriate devices and means for accomplishing results but construed the claim limited to the construction described.

In *Ex parte* Opdyke C. D., 1889, Commissioner Mitchell directs the following article claim to be rejected as too broad:

> As a new article of manufacture, eye-glasses or spectacles having the part which comes adjacent the nose formed of a winding of animal or vegetable material.

The applicant sought to cover all material but mineral.

"MEANS" AND "MECHANISM."

A line of decisions stirred up by Comm'r Hall in *Ex parte* Paige, C. D., 1887, treats this fault of excessive breadth in claims by the definition of the novel element of an applicant's construction under the term "means" or "mechanism." The claim under consideration called for the following combination of elements:

> "Mechanism substantially as set forth for conveying the type along the raceway; mechanism substantially set forth for guiding the same in its movement along the raceway; mechanism substantially as set forth for trying and ejecting the type from the raceway at the proper point; mechanism substantially as set forth for receiving the ejected type and lifting it into the type case."

The examiner objected to this claim as "too vague and indefinite to meet the requirements of the statute (Sec. 4888)."

Commissioner Hall comments on the above claim as follows:

> "He is endeavoring to claim something more and beyond the mere mechanism or machinery. He wants to cover not only the specific mechanism of the four groups but all mechanism that will accomplish these results. He would suppress all further improvements for mechanism that would accomplish these results. He may cover the four mechanical organisms and their equivalents but not all mechanism that could accomplish the same effect (Burr v. Duryee, 1 Wall, 535; McCormick *vs.* Talcott, 20 How., 406; Case *vs.* Brown, 2 Wall., 230). Where the elements of a combination are

> new and do not possess recognized names (as reel, cutter, table, and rake in a reaper) the controlling and leading parts of the several organisms should be referred to as definitive of the invention (Ex parte Demming, Butterworth Commissioner; Ex parte Kerr, Acting Commissioner Dyrenforth; Ex parte Holt; Ex parte Wilkin, C. D., 1884)."

The Commissioner held that the terms "means" and "mechanism" should be used only for mere "adjunctive devices"; that is, not for the main elements of the machine.

In *Ex parte* Miller, C. D., 1888, the applicant claimed "automatically operating mechanism to impart alternate fast and slow movements to the driving shaft." Applicant believed himself to be first to apply such mechanism to his class of machinery. Commissioner Hall says:

> "The principle is old. This varying movement has been applied by an infinite variety of means to an infinite variety of machines. Applicant can not therefore claim it broadly in his machine. He must limit his claim to his specific construction by which he accomplishes this variableness of movement."

To the same effect is the holding in *Ex parte* Treat, C. D., 1888, where the applicant was claiming the combination of three mills with "power actuated feeding devices" for each mill and "power-actuated transfer mechanism" between two of them where the combination of the mills was old, the above "devices" and "mechanism" constituting the essentials of the invention. These, the Commissioner held, must be particularly set forth.

Commissioner Mitchell in *Ex parte* Packholder, C. D. 1890, held the following claim bad for the same reason, viz, the novel element is not set forth in respect to construction and mode of operation as distinguished from the result.

> In an indicator exhibiting apparatus, the combination of a band upon which the exhibits are placed, two reels suitably mounted, upon which the band is wound, driving mechanism for one

> of the reels and a moving vehicle upon which the apparatus is placed (*all old*) *and means connected to the indicator for restoring the expended force to the driving mechanism, actuated by the motion of the vehicle*;

notwithstanding the decision of the Supreme Court of the United States in Morley Sewing Machine Co. et al. *vs* Lancaster, C. D. 1889, holding the following claim good:

> The combination in a machine for sewing shank-buttons to fabrics, of button feeding *mechanism*, *appliances* for passing a thread through the eye of the buttons and locking the loop to the fabric and feeding *mechanism* substantially as described.

The court nowhere intimates that the claims of the patent were "void for indefiniteness" although bristling with "means," "mechanism" and "appliances."

In *Ex parte* Halfpenny, C. D. 1895, Assistant Commissioner Fisher comments on the following claim:

> "The combination of bobbin-feeding, bobbin-separating and stick-filling mechanisms cooperating to feed and separate bobbins and fill bobbin-sticks therewith, substantially as set forth."
>
> "It is the well-settled policy of the Office to allow inventors to claim their inventions as broadly as possible in view of the state of the art."

The claim is not indefinite and vague but too broad when only limited in the manner stated if the mechanism as broadly stated is old. If the novelty is in the specific mechanism, the applicant should be required to specify the novel features. The inference from this decision is that the claim would be allowable if broadly new. *Ex parte* Knudsen, same year, teaches the same practice; as well as *Ex parte* Weaver, C. D. 1897 (Commissioner Butterworth); Young *vs.* Eick Co. 1904; *Ex parte* Donk, C. D. 1905 (Commissioner Allen).

SUMMARY.

It is seen that compliance with the requirement of the first statutes for a distinction between the new and the old was crude and imperfect in the early patents; that the labor of ferreting out the invention covered by the patent was imposed on the courts and the public; that the desirability and necessity of shifting this burden to the patentee and Patent Office soon became apparent, both from the standpoint of the inventor and of the public who had to respect the rights of the patentee; that for years patentees voluntarily summarized their inventions in claims at the end of the specification; that the act of 1836 incorporated this practice into the law; that the first claims were crude, affording little relief, but that out of these primitive efforts at setting forth the invention through years of experiment there was evolved the clear, precise and definite claim demanded in modern practice; and that the claim should not only particularly point out and distinctly set forth structure including the invention but should claim "the part, improvement or combination" constituting the invention.

February 11, 1915.